DISTRICT COURT OF APPEAL OF THE STATE OF FLORIDA
FOURTH DISTRICT
January Term 2011

MILTON ALLEN,
Appellant,

v.

STATE OF FLORIDA,
Appellee.

No. 4D09-2618

[June 8, 2011]

CIKLIN, J.

This is an appeal by Milton Allen from a judgment and conviction on two counts of armed sexual battery, and one count each of armed kidnapping, armed burglary, and aggravated assault. Allen argues that the trial court erred in allowing, over objection, expert testimony regarding the statistical significance of Allen's DNA profile matching that of DNA samples taken from the scene of the crime without first confirming that the expert had sufficient knowledge of the database and the statistical method used. We agree and, consistent with *Gibson v. State*, 915 So. 2d 199 (Fla. 4th DCA 2005), we reverse for a limited evidentiary hearing on the qualifications of the state's expert to testify as to the statistical significance of the DNA profile matches.

At trial, the state presented the testimony of Heather Whitten, a DNA specialist in the forensic DNA unit of the Broward County Sheriff's Office (BSO) crime laboratory, as an expert in forensic serology and DNA analysis. Ms. Whitten testified that she had a master's degree in pharmaceutical science from the University of Florida with an emphasis in forensic DNA and serology and that she had been working in the field of DNA analysis for approximately ten years. She further stated that she had previously testified in court well over two dozen times, and that she had been declared an expert in DNA analysis each time. With regard to her qualifications, Ms. Whitten testified that she was a qualified DNA analyst, and that to maintain her designation she had to pass proficiency tests provided by an outside vendor twice a year.

Next, Ms. Whitten explained that in forensic DNA analysis, she takes a DNA profile from a sample taken from a crime scene and compares it to samples of DNA taken from known individuals in the case. If two profiles are consistent, she considers it to be a match, making it possible that the individual's DNA was found at the crime scene. She testified that her lab uses the polymerase chain reaction (PCR) process to identify DNA. According to Ms. Whitten, PCR testing is generally accepted in the scientific community and every lab in the country, including the FBI laboratory, uses the PCR process. Ms. Whitten also testified that the BSO crime lab was accredited by both the American Society of Crime Lab Directors and the International Accreditation Organization.

Ms. Whitten then began to testify regarding the report that she had generated from her analysis in this case. She explained what samples she had received for testing and that she had to first perform serological testing because she was looking for blood or semen, and then moved on to DNA testing. She then stated that she found only the victim's DNA in samples taken from inside the victim's vagina. She did find, however, DNA that matched Allen's profile on a sample taken from the victim's outer vaginal area.

As Ms. Whitten was about to testify regarding the statistical significance of this sample matching Allen's DNA profile, defense counsel objected on the grounds that the witness was not qualified as an expert in statistical probability. The trial court then permitted defense counsel to conduct a voir dire examination of the witness. Defense counsel asked Ms. Whitten about her training in statistical probability concerning DNA population frequencies. Ms. Whitten testified that she had statistics courses in college, as well as on-site training as part of her qualifications to become an analyst. She also testified that as part of her proficiency testing, she had to report on the statistical significance of matches. She acknowledged that she did not have any degree in statistics and had written no articles on the subject. After defense counsel finished questioning her and in response to a question from the trial judge, Ms. Whitten affirmed that the calculation she used in this case was the same that she regularly used. The state did not ask any questions. After questioning the witness, defense counsel maintained his objection, but the trial court overruled it.

Ms. Whitten then testified that the probability that the DNA profile from the sample which was consistent with Allen's DNA profile would also match that of an unrelated individual in the population was one in twenty billion. In other words, according to Ms. Whitten's testimony, it was almost certain that it was Allen's DNA which was found on the

victim's outer vaginal area. The witness offered no explanation as to how she made this calculation.

As our supreme court has noted, "DNA testing requires a two-step process, one biochemical and the other statistical. The first step uses principles of molecular biology and chemistry to determine that two DNA samples look alike. The second step uses statistics to estimate the frequency of the profile in the population." *Butler v. State*, 842 So. 2d 817, 827 (Fla. 2003). Both steps require use of scientific methods that must satisfy the *Frye*[1] test. *See id.* at 827-28.

Here, Allen challenges the second step of the DNA testing process, contending that the state's expert was not properly qualified to testify as to the statistical significance of the DNA matches. A properly qualified expert on population frequency must be able to show that her testimony regarding the statistical methodology used and the database employed will be "based on established scientific principles in which she was trained." *See Everett v. State*, 893 So. 2d 1278, 1281–82 (Fla. 2004). The expert, however, does not have to be a statistician or mathematician to testify as to the statistical results. *See Darling v. State*, 808 So. 2d 145, 158 (Fla. 2002); *Gibson*, 915 So. 2d at 201. "Furthermore, admissibility is not contingent upon the expert having compiled the database himself. Instead, 'a sufficient knowledge of the authorities pertinent to the database is an adequate basis on which to render an opinion.'" *Branch v. State*, 952 So. 2d 470, 483 (Fla. 2006) (internal citation omitted) (quoting *Butler*, 842 So. 2d at 828); *Murray v. State*, 692 So. 2d 157, 164 (Fla. 1997) ("[T]his expert must, at the very least, demonstrate a sufficient knowledge of the database grounded in the study of authoritative sources.").

Where the trial court permits an expert to testify without first requiring the expert to demonstrate a "sufficient knowledge of the database grounded in the study of authoritative sources," appellate courts have consistently remanded for limited evidentiary hearings. *See, e.g.*, *Gibson*, 915 So. 2d at 202; *Perdomo v. State*, 829 So. 2d 280, 284

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[1] Under *Frye v. U.S.*, 293 F. 1013, 1014 (D.C. Cir. 1923), before admitting into evidence the testimony of an expert witness concerning a new scientific principle, "a trial court must determine (1) whether such expert testimony would assist the jury in understanding the evidence or in deciding a fact in issue; (2) whether such testimony is based on a scientific principle which has gained general acceptance in that particular scientific community; and (3) whether the expert witness is sufficiently qualified to render an opinion on the subject." *Murray v. State*, 692 So. 2d 157, 161 (Fla. 1997).

(Fla. 3d DCA 2002); *Hudson v. State*, 820 So. 2d 1070, 1072–74 (Fla. 5th DCA 2002); *Miles v. State*, 694 So. 2d 151, 153 (Fla. 4th DCA 1997).

Ms. Whitten, the state's expert witness here, never testified (either during the voir dire examination or during her direct examination) as to the database or methodology she used to calculate the statistical significance of Allen's DNA profile matching that of samples taken from the crime scene. The deficiency in her testimony exceeds that in *Gibson*, *Perdomo*, *Hudson*, and *Miles*, where the appellate courts all found that the cases had to be remanded for limited evidentiary hearings. The following language from *Gibson* is applicable here:

> In this case, like *Perdomo*, [the witness] never identified, much less displayed "sufficient knowledge of" the database or method she used for the statistical component of her opinion. At no point did [the witness] explain what method she used, nor did she demonstrate any knowledge of the authorities pertinent to the database. . . .
>
> Based on *Perdomo* and *Hudson*, this matter must be remanded for a limited evidentiary hearing to determine whether the expert had sufficient knowledge of the authoritative sources to present the statistical evidence.

Gibson, 915 So. 2d at 202.

The state argues that this case is distinguishable from *Gibson* because the trial court permitted defense counsel to perform a voir dire examination of Ms. Whitten, and that defense counsel never questioned her about her knowledge and experience regarding the methodology and database used. This argument, however, is without merit. Defense counsel properly objected on the grounds that the witness had "not been qualified as an expert in statistical probability." At this point, it was the state's burden to prove that the expert was qualified, and not Allen's burden to show that she was not. *See Brim v. State*, 695 So. 2d 268, 272 (Fla. 1997); *Hudson v. State*, 844 So. 2d 762, 763 (Fla. 5th DCA 2003) ("[T]he state must prove by a preponderance of evidence that an expert testifying about DNA statistical and population genetics analysis must demonstrate 'sufficient knowledge of the database grounded in the study of authoritative sources.'" (quoting *Murray*, 692 So. 2d at 164)).

Because the record does not reveal the statistical methodology used to calculate the DNA population frequencies in this case, or Ms. Whitten's qualifications to present this evidence, we reverse Allen's conviction and

sentence and remand this case to the trial court for a limited evidentiary hearing similar to the ones ordered in *Gibson* and *Miles*. On remand, the trial court is to (1) assess Ms. Whitten's competence to present the statistical evidence; and (2) clarify the exact methodology and database used for her calculations. If requested and depending on the methodology and database used, the trial court should also conduct a *Frye* hearing to determine the general acceptance of the employed statistical techniques and database. *See Roberts v. State*, 841 So. 2d 558, 560 (Fla. 4th DCA 2003). If following a hearing, the court determines that there was a sufficient basis for admitting the DNA evidence presented at trial, the court should reinstate the conviction and sentence. If the court determines, however, that the DNA evidence was not presented by a qualified witness, then it should grant a new trial. Our remand is limited solely to this issue and we direct that the hearing be held as expeditiously as possible.

We have carefully considered the remaining issues raised by Allen, but find no reversible error beyond that discussed in this opinion. Accordingly, this case is remanded for further proceedings consistent with this decision.

Reversed and remanded for a limited evidentiary hearing.

GROSS, C.J., and HAZOURI, J., concur.

* * *

Appeal from the Circuit Court for the Seventeenth Judicial Circuit, Broward County; Andrew L. Siegel, Judge; L.T. Case No. 09-002048 CF10A.

Siobhan Helene Shea, Palm Beach, for appellant.

Pamela Jo Bondi, Attorney General, Tallahassee, and Georgina Jimenez-Orosa, Senior Assistant Attorney General, West Palm Beach, for appellee.

Not final until disposition of timely filed motion for rehearing.